Appl. No. 09/769,851

Reply dated January 13, 2005

Reply to Advisory Action of December 9, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A wearable device comprising:

one or more circuit substrates comprising electrically conductive parts being disposed in at

least a first plane;

a radio unit operating at a radio frequency; and

a loop antenna coupled to the radio unit, the loop antenna comprising a single loop formed

of a conductor formed into a, the loop defining an area and being disposed in a second plane;

wherein the electrically conductive parts of at least one of said one or more circuit substrates

substantially act as a ground plane causing a ground plane effect for the loop antenna and wherein

said first plane is substantially coplanar with said second plane and such that at least the electrically

conductive parts of said at least one circuit substrate are within said area defined by the loop when

observed in plan view minimizing the ground plane effect of the electrically conductive parts of said

at least one circuit substrate on the loop antenna.

2. (Original) The wearable device of claim 1, wherein the radio unit is mounted on one of said one

or more circuit substrates.

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2

Appl. No. 09/769,851

Reply dated January 13, 2005

Reply to Advisory Action of December 9, 2004

3. (Original) The wearable device of claim 1, wherein said at least one circuit substrate is positioned

entirely within the area defined by the loop, when said at least one circuit substrate and the loop are

observed perpendicularly with respect to the second plane.

4. (Original) The wearable device of claim 1, wherein the loop antenna is formed on the periphery

of said at least one circuit substrate.

5. (Original) The wearable device of claim 1, wherein the loop antenna is coupled to the radio unit

via a balancing means.

6. (Original) The wearable device of claim 5, wherein the balancing means comprises a balancing

transformer.

7. (Original) The wearable device of claim 5, wherein the balancing means comprises a balanced

transmission line.

8. (Original) The wearable device of claim 1, wherein said at least one circuit substrate and the

second plane have a maximum vertical distance of about 0.1 times a wave length corresponding to

the radio frequency that the radio unit operates at wherein the vertical distance is measured

perpendicular to the second plane.

G:\Network Files\9038\1001\PROSECU\Response to Advisory 12-09-04.wpd

3

Reply to Advisory Action of December 9, 2004

9. (Original) The wearable device of claim 1, wherein the loop antenna is coupled to the radio unit

via a balancing means at two separate points located substantially 90.degree. apart from each other

on the conductor loop of the loop antenna with respect to the center of the conductor loop in order

to enable the use of circular polarization.

10. (Original) The wearable device of claim 9, wherein the balancing means comprises a balancing

transformer.

11. (Original) The wearable device of claim 9, wherein the balancing means comprises a balanced

transmission line.

12. (Original) The wearable device of claim 1, wherein the length of the conductor of the loop

antenna is substantially equal to a wavelength corresponding to the radio frequency that the radio

unit operates at.

13. (Original) The wearable device of claim 1, wherein said at least one circuit substrate is a printed

circuit board.

14. (Original) The wearable device of claim 1, wherein the radio unit comprises a radio receiver

and/or a radio transmitter.

9038.1001

Reply dated January 13, 2005

Reply to Advisory Action of December 9, 2004

- 15. (Original) The wearable device of claim 14, wherein the radio unit comprises a GPS receiver.
- 16. (Original) The wearable device of claim 1, wherein the wearable device comprises a display unit.
- 17. (Original) The wearable device of claim 1, wherein the wearable device comprises a watch circuit.
- 18. (Original) The wearable device of claim 1, wherein the wearable device comprises a computer.
- 19. (Original) The wearable device of claim 1, wherein the wearable device comprises a wrist watch type housing of electrically non-conducting material.